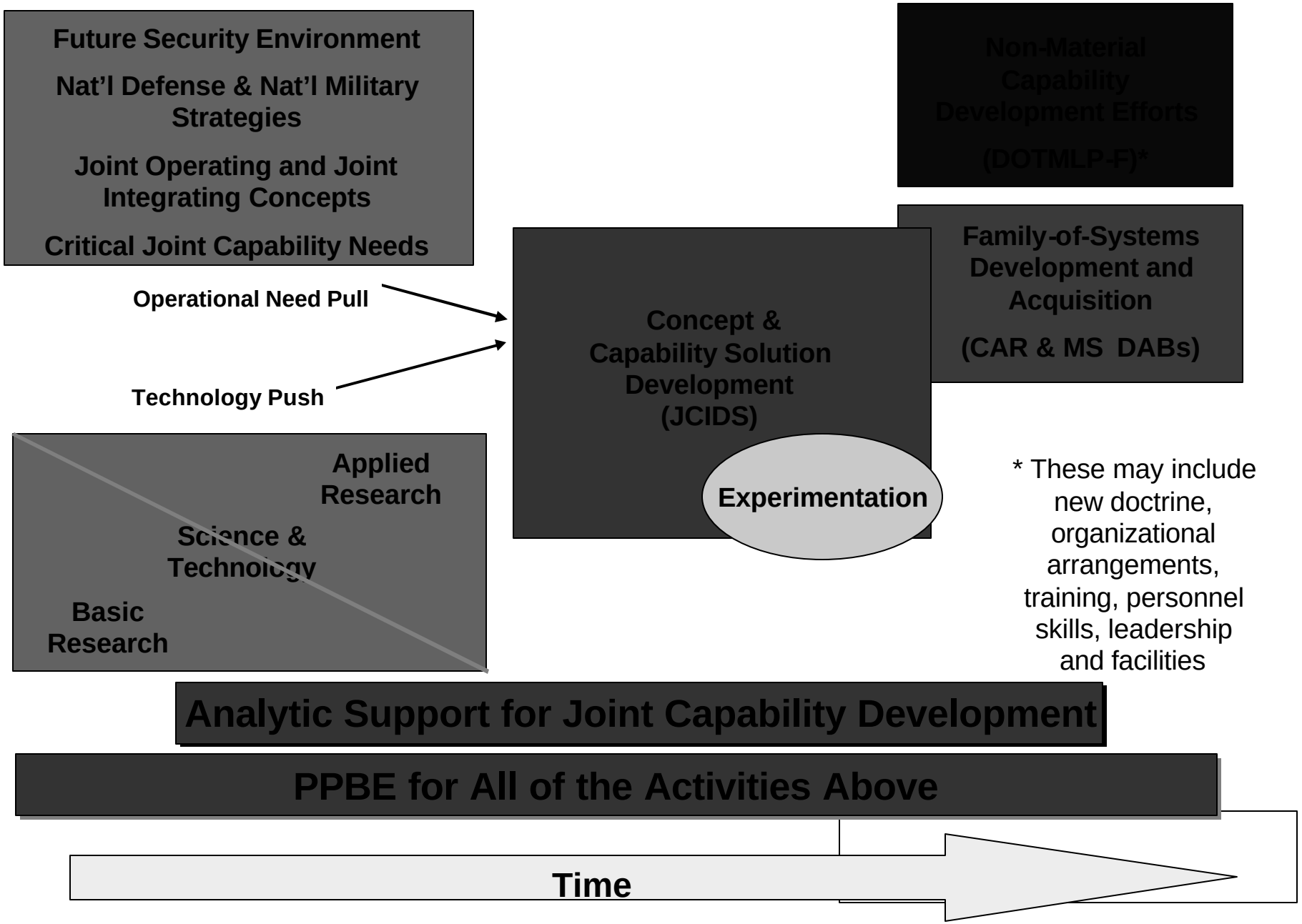
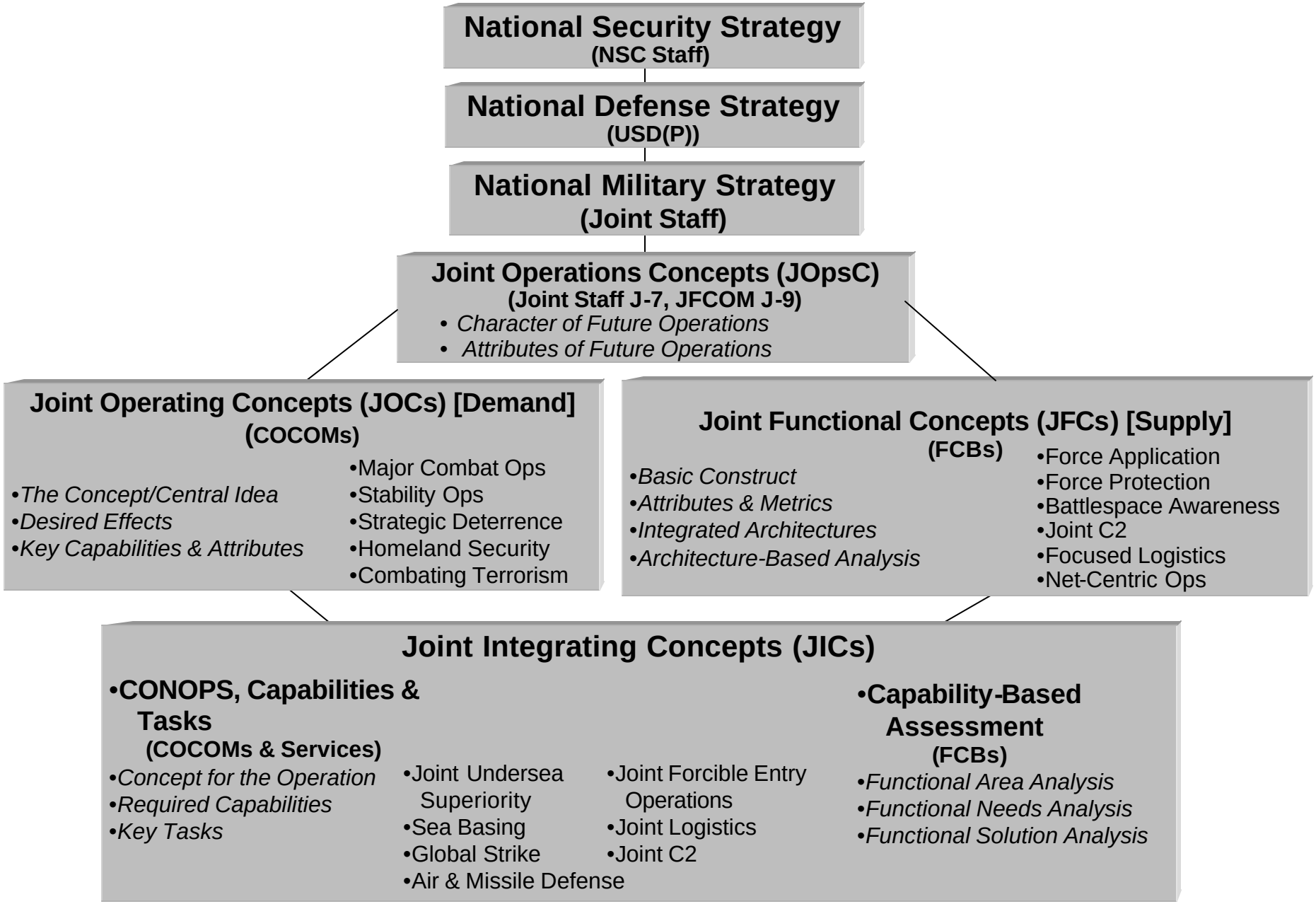
DoD's Ongoing Efforts to Implement Capabilities-Based Planning

- **September 2004**

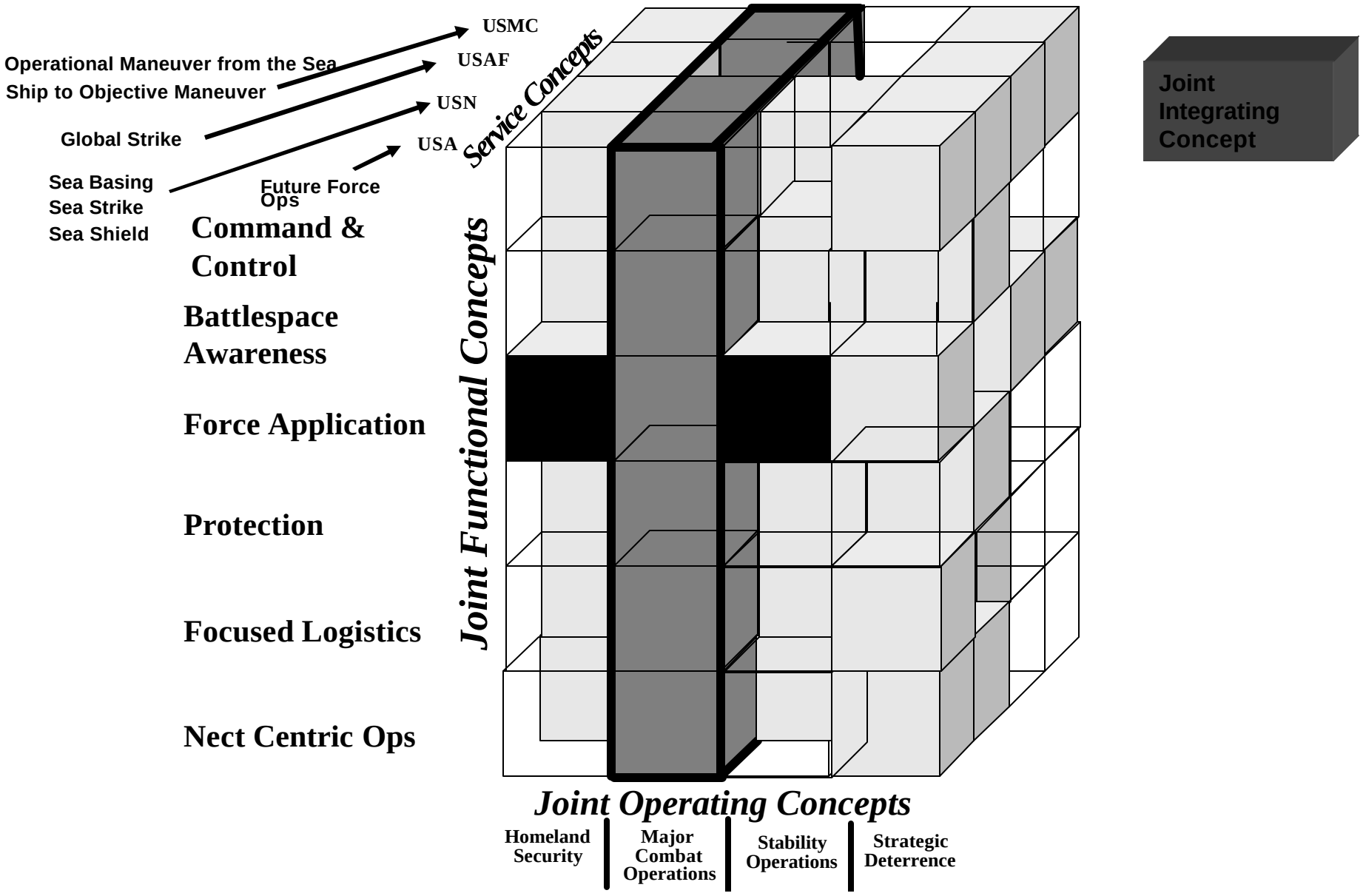
CBP Process to Fielding Enhanced Joint Capabilities



Hierarchy of Strategies and Joint Concepts



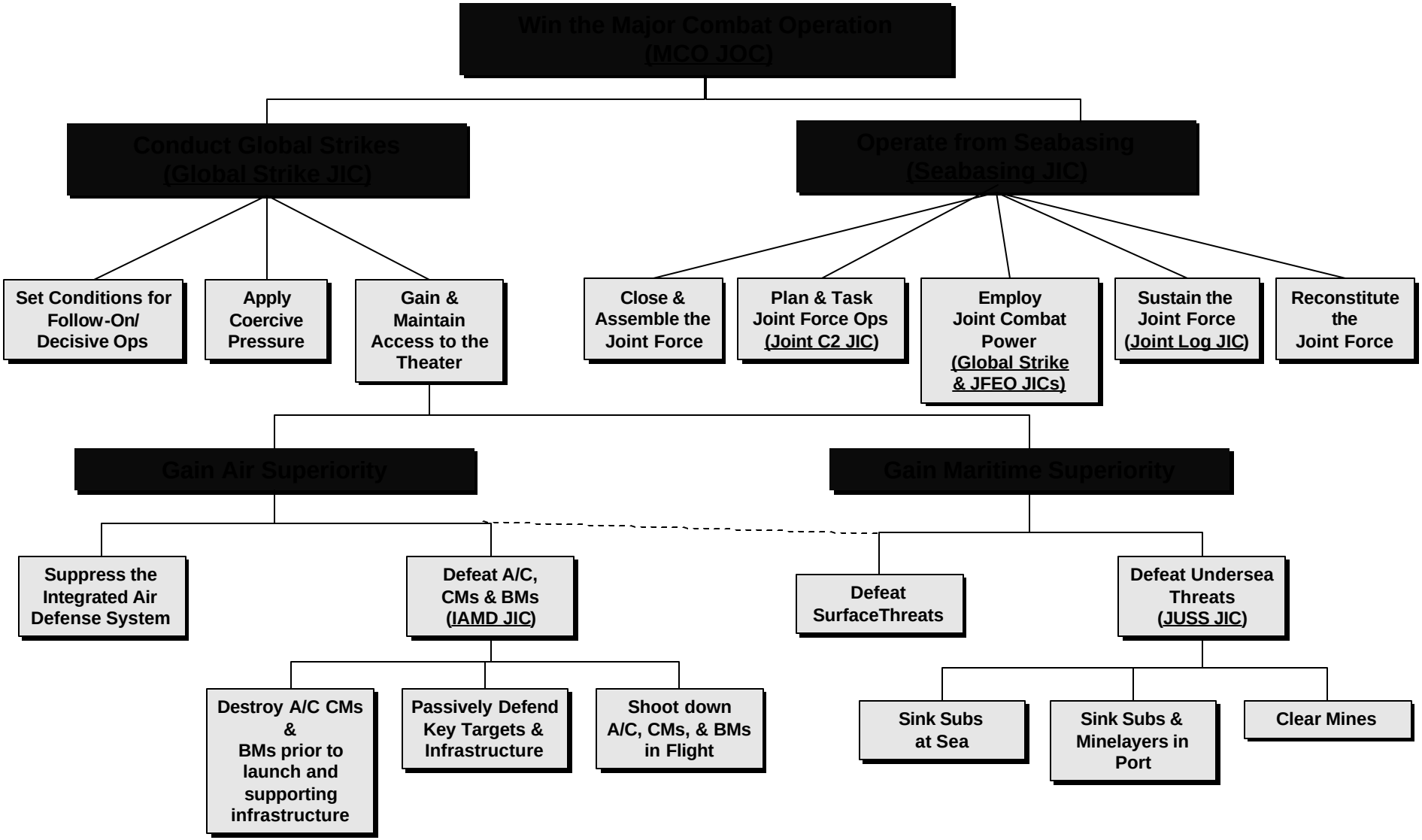
Joint & Service Concept Relationships



Definitions: Capability, Effect, Task, Condition, and Standard

- **Capability**
  - The **ability** to achieve an **effect** to a **standard** under **specified conditions** through multiple **combinations of means and ways** to **perform** a set of **tasks**
- **Effect**
  - An **outcome** (**condition**, **behavior, or degree of freedom)** resulting from tasked actions
- **Attribute**
  - A **testable or measurable characteristic** that **describes** an **aspect of** a system or **capability**
- **Task**
  - An **action** or **activity** based upon doctrine, standard procedures, mission analysis or concepts that may be **assigned to** an **individual or organization**
- **Condition**
  - A **variable of the environment** that **affects performance** of a task
- **Standarrd**
  - The **minimum proficiency** required in the **performance** of a **task**. For mission-essential tasks of joint forces, **each task standard** is defined by the joint force commander and **consists of** a **measure** and **criterion**.

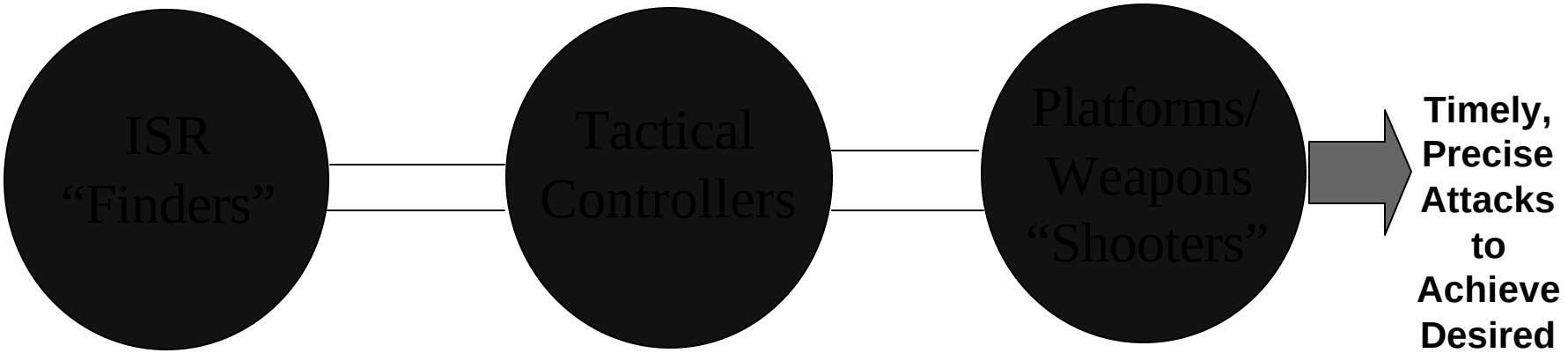
Levels of Analysis: Concepts, Capabilities & Tasks at Various Levels



Effects Chain / Kill Chain / Mission Thread

Detect – Track – Identify – Decide / Task – Engage / Attack - Assess

Tactical Level Kill / Effects Chain or Mission Thread



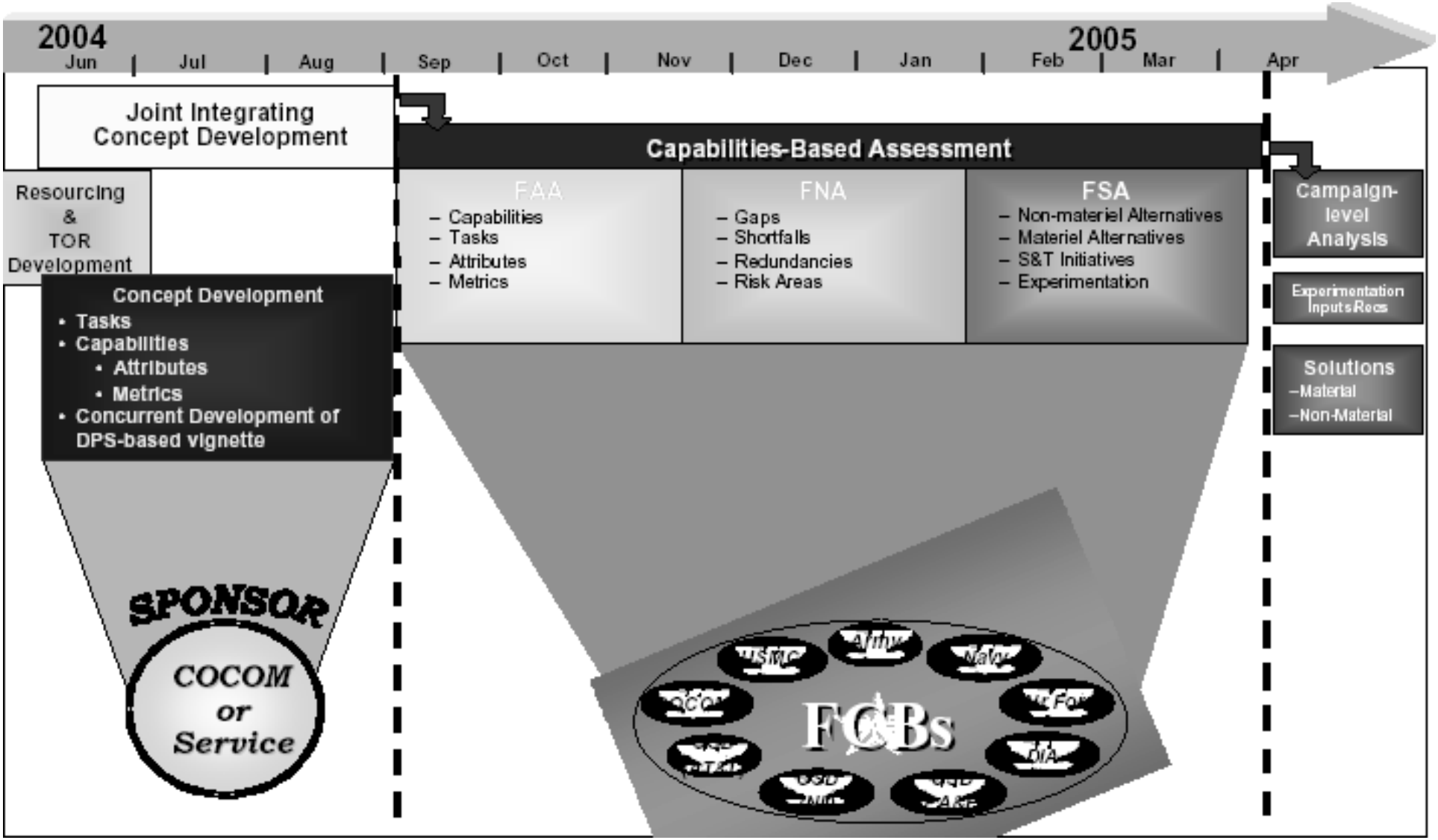
- **Detect / Track the target**
- Cross-cue multiple sensor platforms
- Provide info to identify the target
- Relay this information to the Tactical Controller
- **Assess and report initial results** of the attack to the Tactical Controller

- **Decide/Task available Finders to search** for a target in a given area
- **Decide/Task a "ready" Shooter to attack** a specific target
- Provide information to help the Shooter engage the target
- Receive information from the Finders and Shooter on the results of the attack

- **Engage / Attack the assigned target**
- Provide initial target damage assessment to the Tactical Controller, when possible

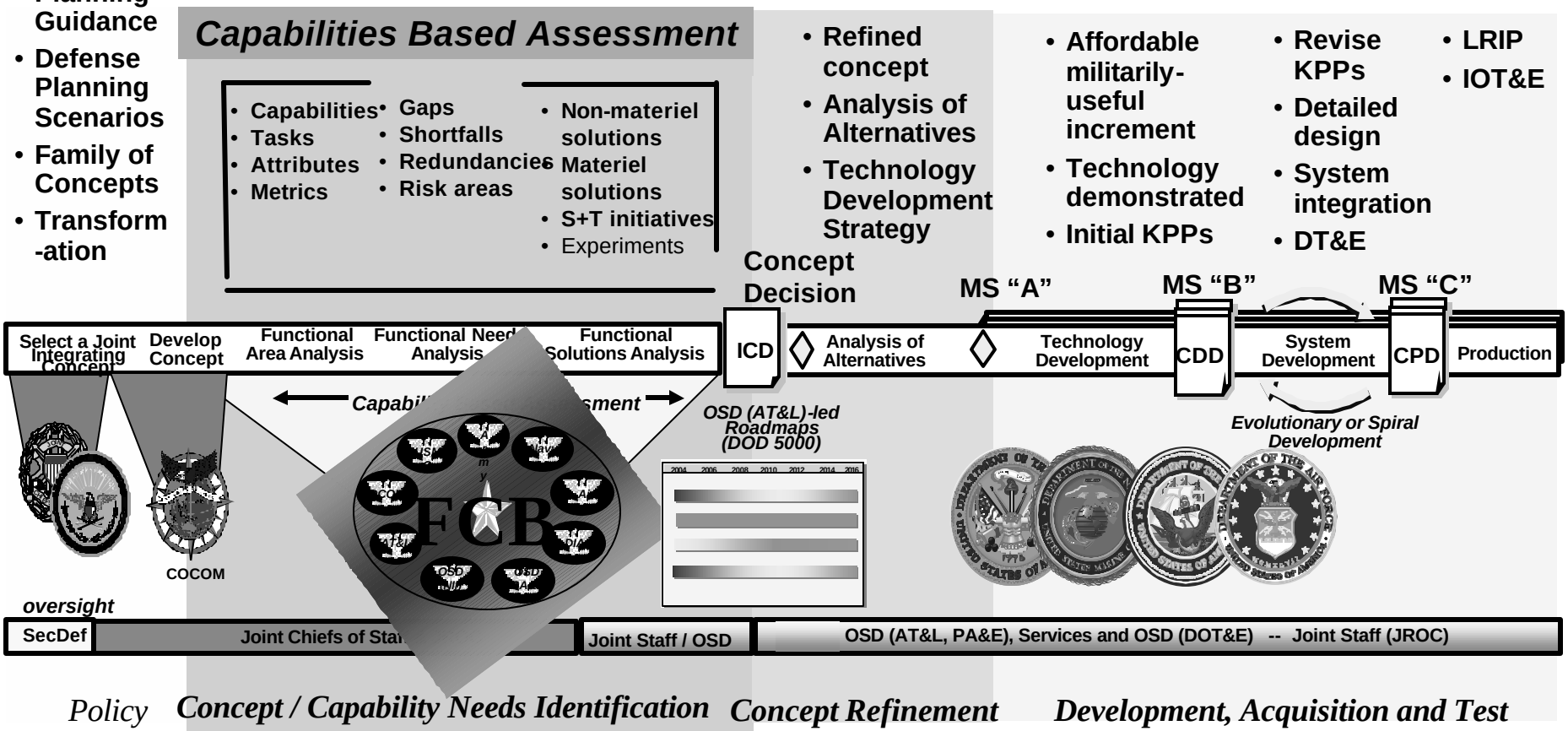
Next Round of Joint Integrating Concepts

(IA&MD, Global Strike, Seabasing, Joint Logistics (Sustainment), Joint C2)



End-to-End Capability Development Process

- Strategic Planning Guidance
- Defense Planning Scenarios
- Family of Concepts
- Transform -ation

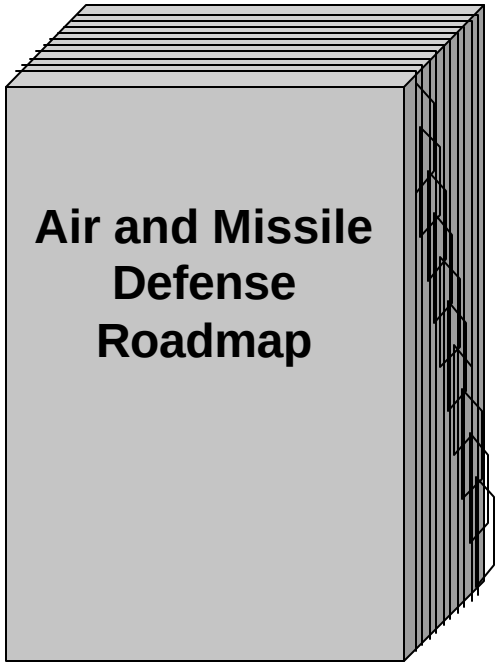


Capability Roadmaps for Acquisition Management Capability Area Reviews

- Nature of the Capability Roadmap will vary by capability area
- Starts with "as is" and focuses on where we want to go ("to be")
- Lay out Department's strategic plan considering:
  - Portfolio of materiel and non-materiel solutions
  - Capabilities that exist at the Family/System-of-Systems level
  - What to expect from each system in the family
  - Network enablers
  - Affordability
  - Other considerations
- Cross-cutting management, engineering and testing activities
- Provides a framework for decision making, prompts and informs decisions, and reflects the decisions made within the Department's other processes

But… Roadmapping a complete capability area is hard. Need committed COCOM, Service, and/or Agency support

Air & Missile Defense Roadmap

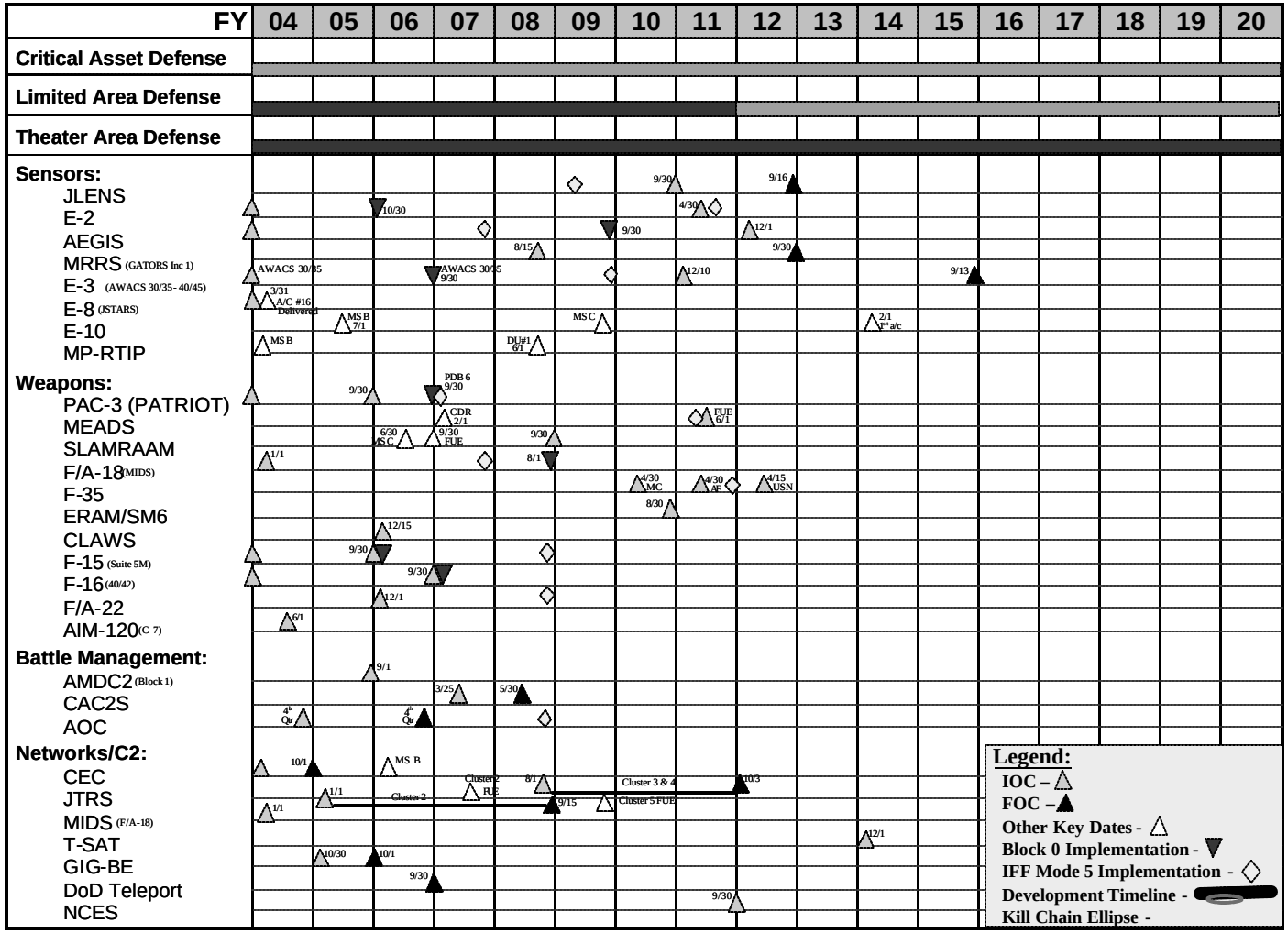


1. Executive Summary
2. Air and Missile Defense Roadmap
   - Introduction
   - Purpose
   - Scope
   - Limitations and Constraints
3. Operational Concept
4. AMD Capability Assessment
5. Integrated AMD Program Schedule and Capabilities
6. DOTMLPF Alternatives for AMD
7. Experimentation and Emerging Technology
8. Net-Centric Under-Pinning
9. AMD Test and Evaluation
10. Conclusions and Recommendations
11. Appendices

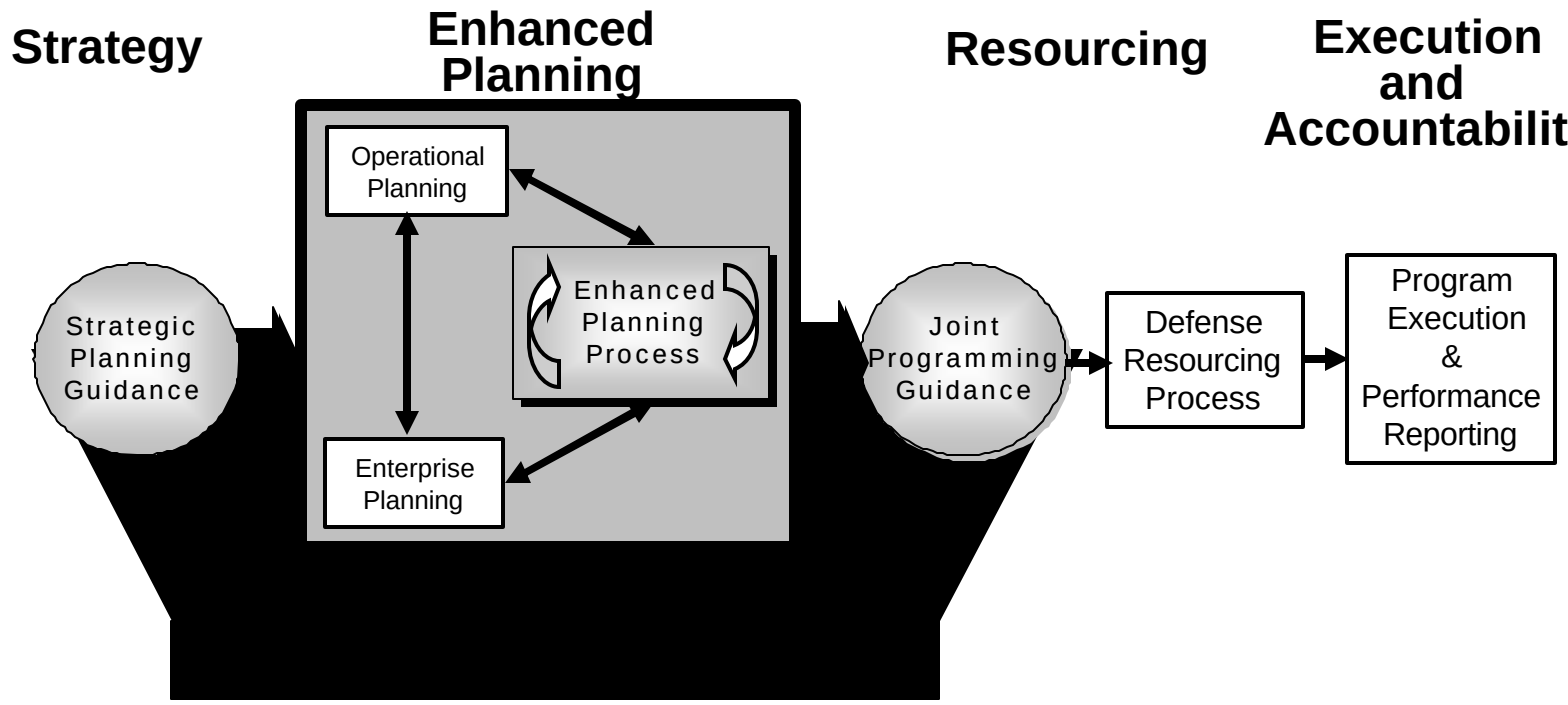
EXAMPLE

Air & Missile Defense Roadmap – Schedule

as of 1 Apr 04



Joint Defense Capability Study "End State" PPBE Process

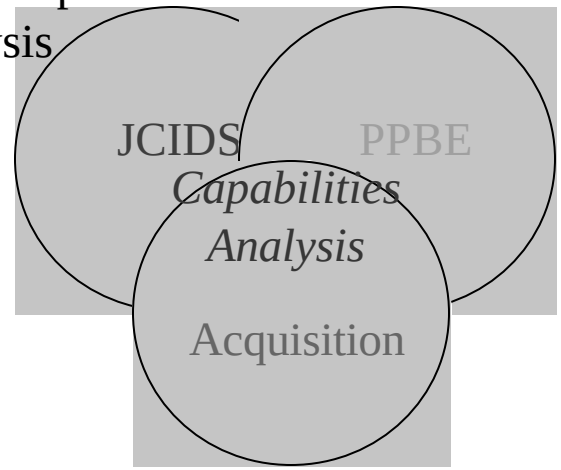


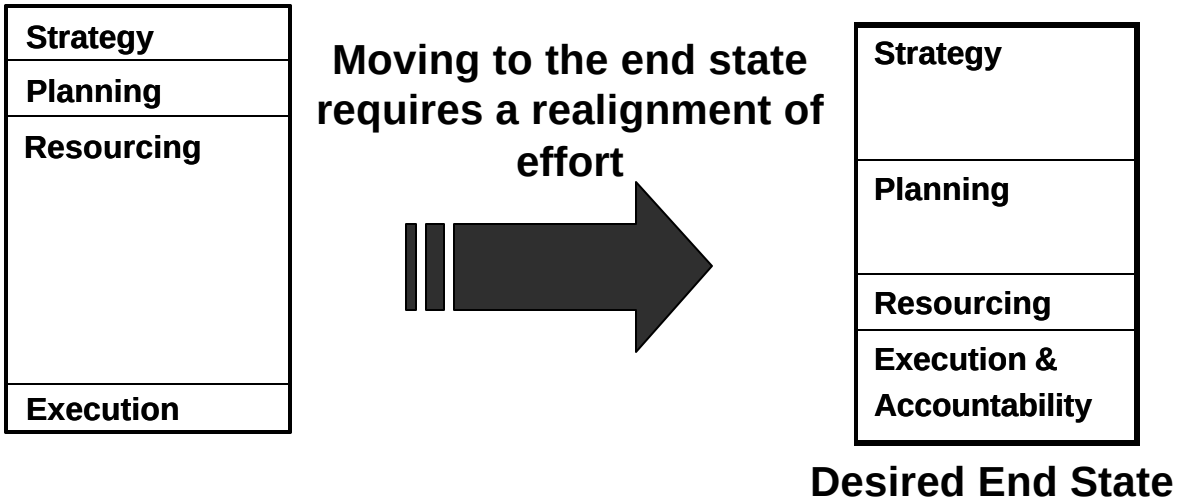
Resource-informed strategic planning direction → *Analysis to formulate and assess major issues and risk tradeoffs* → *Fiscally executable Programming guidance*

SPG 06-11 will be the first step in transitioning to the proposed Joint Defense Capabilities Process

Test an Approach to Capabilities-Based Resourcing / PPBE Reform using "Capability Delivery Groups"

- Implement Aldridge Study recommendations on a streamlined PPBE process
- Capabilities-based resourcing w/ Joint Capabilities Tradeoff Analysis
- Implement MID 913 program-budget data integration
- Implement MID 901 performance metrics
- Incorporate budget execution feedback and accountability
- Enable feasible performance-based budgeting and reporting





A streamlined, collaborative yet competitive and efficient process that produces fully integrated joint warfighting capabilities.

Many organizations working on capabilities methodologies, but:

-- no comprehensive process that includes capabilities-based resourcing + ties JCIDS-PPBE-Acquisition Processes together

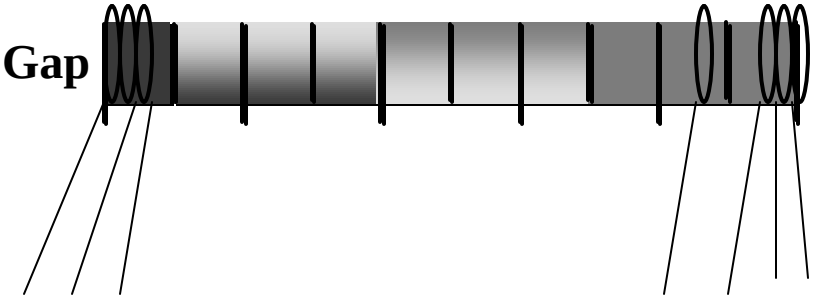
-- no consistent "entity" for planning-programming-resourcing-operational execution to enable real accountability

Using "Capability Delivery Groups" (CDGs)

- **Capability Delivery Group (CDG): a collection of related Program Elements (PEs) that fit together (most as an operational / organizational entity) to deliver military capabilities**
  - **CDG will include allocated support and infrastructure costs**
  - **Examples of Service / Agency-based CDGs: An F-16 wing; a Carrier Strike Group, a Marine Expeditionary Force, an Army Stryker brigade, a major DIA intelligence mission**
- **Focus on the major capabilities in DoD**
  - **Hundreds of CDGs instead of thousands of PEs**
  - **Integrate PPBE and reduce administrative workload**
- **Designed for strategic decision-making by the senior DoD leadership**
  - **Support decisions on the size and composition of DoD's force structure**
  - **Approximate the full-cost of each joint capability**
  - **Provide building blocks for "Joint Capability Packages" that compete in the Joint Capability Tradeoff Analysis (JCTA)**
- **Later, if widely implemented, fully costed CDGs could serve as a "line of business" for managing costs, reporting performance**

Develop Budget "Offsets" and Target EPP/JCTA Studies, by "Working the Extremes" of the Capability Gaps / Surpluses

Serious Capability Gap



Capability Sufficiency/Surplus

EPP/JCTA work to identify additional capabilities/programs to <u>fund</u>

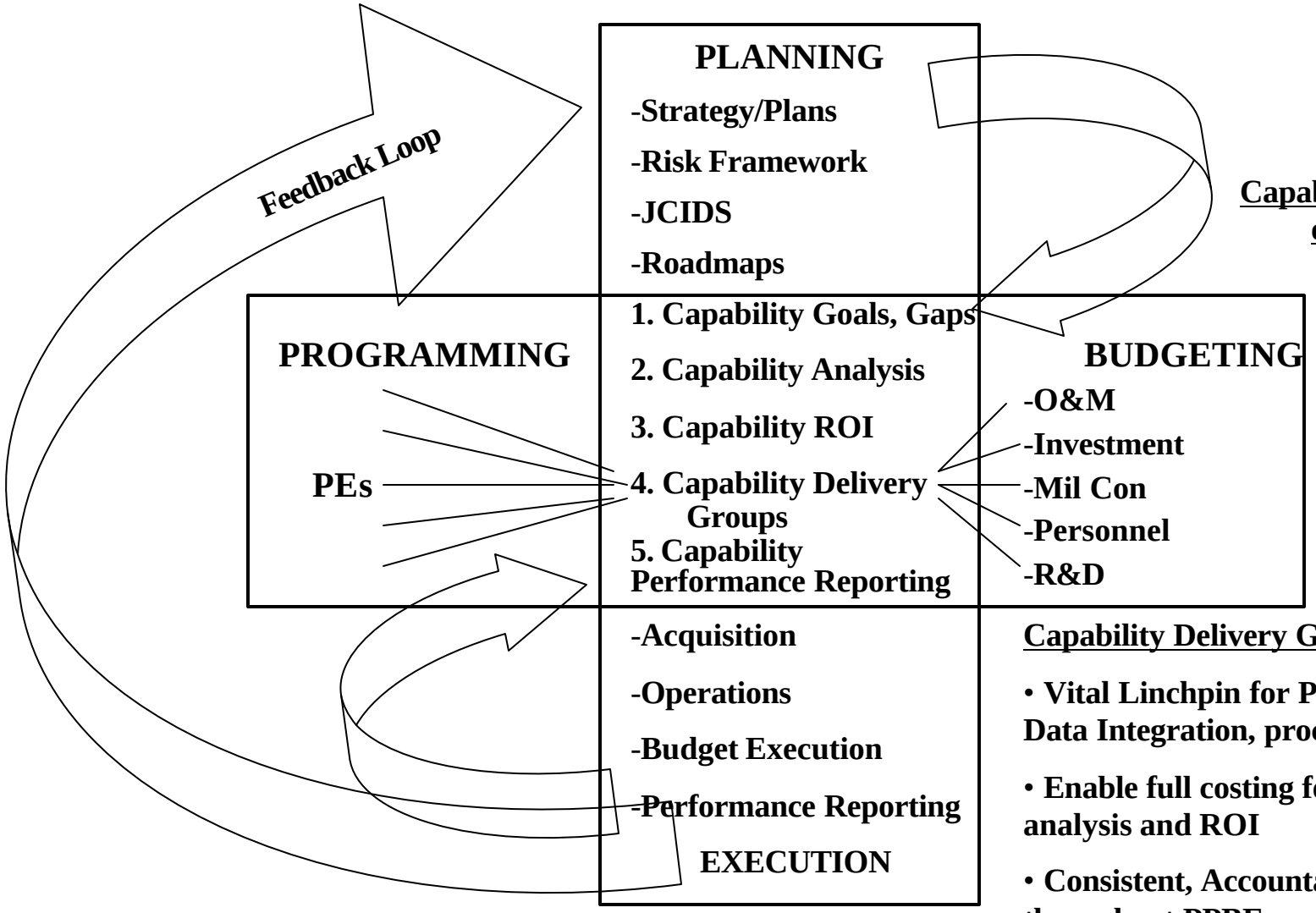
EPP/JCTA work to identify capabilities/programs to <u>cut</u>

• Capability based resourcing must address not just where to buy more capability—but where to make cuts (take risks) to pay for the improvements

• "Working the extremes" of capability gaps/surpluses to target EPP and JCTA studies a good way to identify where to spend more and where to cut, and to deal with the large yellow area where we are not really sure whether there is a significant capability gap or sufficiency

•JCIDS does not need to be comprehensive and accurate—just approximately right

Capabilities-Based PPBE Framework Using Capability Delivery Groups



Capability the Measure of All Things

Capability Delivery Groups:

- **Vital Linchpin for Program-Budget Data Integration, process streamlining**
- **Enable full costing for better, quicker analysis and ROI**
- **Consistent, Accountable Entity throughout PPBE**
- **Resources Linked Back to Strategy**

BACK UP

JCIDS Analyses

- **Functional Area Analysis (FAA)**. FAA identifies the **tasks**, **conditions**, and **standards** needed to **achieve desired objectives**. It incorporates a **review** of relevant national **strategies**, Joint and Service Operational **Capabilities, Joint Functional Concepts**, integrated **architectures**, and relevant **task lists** as input. Its primary output includes the **definitions of required capabilities**, to be reviewed in the follow-on functional needs analysis. Capability definitions should be **general** enough so as **not to prejudice** decisions in favor of a particular means of implementation, but at the same time, **specific enough to permit evaluation** of alternative approaches to implement the capability.

- **Functional Needs Analysis (FNA)**. FNA assesses the **ability** of the **current and planned DOTMLPF programs to provide the capabilities** identified in the FAA, under the full range of operating conditions and to the designated standards. The FNA **produces a set of capability gaps or shortcomings** that require solutions, and it indicates the time frame in which those solutions are needed. It may also **identify redundancies** in capabilities that reflect inefficiencies. Architectural analysis techniques are used to describe complex relationships and linkages, to portray the synergy provided by multiple DOTMLPF solutions within the force, and to identify gaps before new systems are developed.

- **Functional Solution Analysis (FSA)**. FSA entails an operationally-based **assessment of materiel and non-materiel approaches to solving** (or mitigating) capability gaps previously identified. On the basis of the capability needs, potential solutions are identified. Identified capability needs or redundancies establish the basis for developing materiel solution approaches.

JCIDS Requirements Documentation

- The **JROC** solicits and reviews for approval **Initial Capabilities Documents (ICD**), **Capability Development Document (CDD)** and **Capability Production Documents (CPD).** These documents provide the **formal communication of capability needs** between the **operator**, **acquisition**, **test and evaluation**, and **resource management communities**

- The **ICD identifies a specific capability gap**, and establishes the need for a materiel approach to resolve it. The approach will be defined in terms of supported functional area(s), timeframes, the range of military operations, and **key attributes with appropriate measures** of effectiveness

- The **CDD describes a realistic, tangible increment of capability** that can be produced, deployed, and supported at an affordable cost.
  - Each **capability increment will have its own set of performance attributes and threshold values**, aligned to needs outlined in the ICD
  - These operational performance attributes are necessary for the acquisition community to design, develop, and test the proposed system

- The **CPD** addresses the **production attributes and quantities** for an acquisition program.
  - CDD and CPD identify the operational and support-related performance attributes of systems, and identify the attributes contributing most significantly to the desired capability
  - CPD provides the linkages to supporting analyses, to ensure production of systems is aligned and synchronized to fully realize the needed capabilities

JCIDS Ties to the DOD 5000 Series